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RISK MANAGEMENT FOR BRIGADES AND BATTALIONS

BY

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INTRODUCTION

This paper describes a concept, with procedures and responsibilities, for risk management in brigades and battalions during Mission Essential Task List (METL) collective training and operations. The concept reflects the roles of safety and fratricide avoidance as elements of force protection as described in FM 100-5, Operations. The risk management procedures and responsibilities are consistent with those presented in FM 101-5, Command and Control for Commanders and Staff (Final Draft, August 1993). Also, the procedures are integrated into and support phases of the training management cycle in FM 25-101, Battle Focused Training.

These procedures have been tested with three brigades during the planning, execution and assessment phases for rotations at the National Training Center (1) and Joint Readiness Training Center (2). Test brigades achieved significant reductions in ground accident casualty rates (-76%, -54% and -45% respectively) and no aircraft accidents. Last, this paper updates risk management tactics, techniques and procedures published in the Center for Army Lessons Learned Newsletter, "Force Protection (Safety)", No. 9, December 1993.

CONCEPT

Historically, the Army has suffered more losses to accidents (including fratricide) than to enemy action while deployed in combat theaters. Typically, these accidents are the same types experienced in peacetime during exercises at home station and at combat training centers (CTCs). A battle-focused training program can identify and correct the reasons for these accidents and protect the force. Effective force protection provides the commander a full measure of combat power for use at the decisive point and time.

Combat power is generated by men and machines executing combat functions in the operational environment. Accidents occur when this performance is below standard due to human error, materiel failure or environmental factors. As in any after

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action review, this identifies **what happened** but the second key to improved performance is to identify the reasons **why it happened**. These reasons are found in the readiness of combat functions.

Army experience reveals five readiness factors that are sources of accidents. The first factor is **support** which functions to meet operational requirements for equipment, supplies, personnel, facilities, maintenance and services, e.g., medical. The second is **standards** which are procedures with performance standards that exist for each task and are clear and practical. The third is **training** which provides the skills and knowledge necessary for performance to standard. The fourth is the **leader** who enforces performance to standard through guidance, teaching, oversight and discipline. The last is the **individual** who is responsible for self-disciplined performance and conduct. Given adequate support, standards, training and leadership, the individual is expected to perform tasks to standard in operational conditions.

Combat functions that are below standard in readiness are hazards because this condition leads to human error, materiel failure and environmental factors that cause accidents. The final key to improved force protection performance is to identify **what to do** to control these hazards and thus reduce the risk of accidents. The Army's doctrinal process for identifying and controlling hazards is **risk management**. The process has five steps: (1) **Identify Hazards,** (2) **Assess Risk of Each Hazard,** (3) **Make Risk Decisions and Develop Controls,** (4) **Implement Controls** and (5) **Supervise.** (These steps are fully explained in Chapter 4 and Appendices F and N of FM 101-5, Final Draft, August 1993; and Chapter 3, FM 25-101).

The successful commander will use risk management first as a means of establishing and sustaining the performance of combat functions to standard, i.e., minimizing human error, materiel failure and the effects of environmental factors. He will also use risk management as a means to continuously improve his unit's training and operational capabilities by creating new standards. To do this, he will:

1. Identify opportunities to increase training realism for current operational capabilities and identify opportunities to enhance operational capabilities.

2. Identify and assess hazards that form the safety basis for existing training and operational standards.

3. For these hazards, eliminate/substitute/modify existing controls for training and identify creative/new technology controls for operational capabilities.

4. Use these control options to:

- Conduct more realistic training.
- Increase operational capability.
- Reduce risk to the force.
- Create an optimal mix of the above benefits.

RISK MANAGEMENT INTEGRATION- SUMMARY

To be most effective, risk management should be integrated into existing commander processes which then become risk management tools (sample tools are listed in Enclosure 1). The objective is to help the commander improve what he is already doing. The procedures provide for:

1. The development of safety goals, objectives and priorities for inclusion in the commander's quarterly training guidance.

2. A safety assessment, as part of the commander's training assessment, to identify readiness shortcomings (hazards) and actions to correct or control them during the planning phase of collective training.

3. The systematic observation and assessment of the unit's risk management and safety performance. Objective is to provide the commander sufficient information to determine whether performance met his guidance and to identify corrective actions to feed back into the training management cycle and Tactical Standing Operating Procedures (TACSOP).

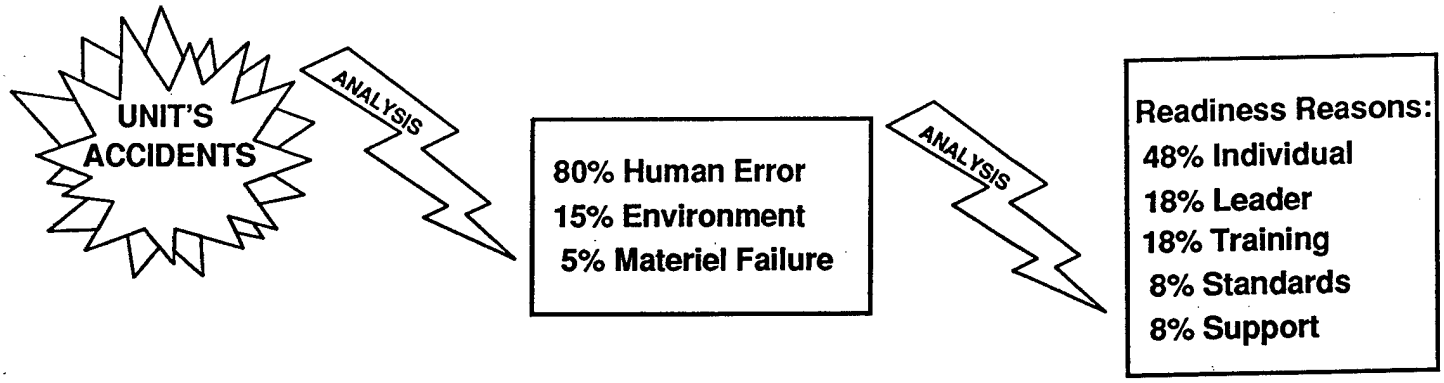
4. The integration of mission risk management into the tactical decision making process to identify and control hazards. Continuous application of risk management procedures for unexpected hazards.

RISK MANAGEMENT PROCEDURES - COLLECTIVE TRAINING

1. **Commander's Guidance.** To assist the Commander in developing safety policy, goals, objectives and priorities, the Safety Officer (SO):

a. Retrieves the unit's past (minimum of one year) accident reports (METL related only) from hard copy files or from the Army Safety Management Information System (if not available in unit, task local Safety Office for this information).

b. Analyzes the reports to determine cause factors and readiness reasons. A summary of factors and reasons is at Enclosure 2.



c. Prepares a report for the commander that identifies the most probable and most severe types of accidents to be expected during the upcoming planning and execution phases of training. The report should also identify the most likely readiness reasons for these accidents and corrective control options for selection by the commander.

d. As directed, assists the commander in developing safety input for quarterly training guidance and for TACSOP.

2. Planning Phase (Safety Assessment). SO develops input to Commander's Training Assessment by executing the following actions:

a. Safety Quiz. Develop a quiz (example aviation and ground quizzes available on request from local Safety Office or Army Safety Center) to determine soldier knowledge of safety guidance specified by the unit (e.g., TACSOP) and the area of operations (e.g., home station installation or CTC). Administer the quiz to all soldiers and set a minimum score (e.g., 80%) for any soldier to be safety certified for a field training exercise. Results will be rolled up from platoon to brigade level enabling commanders and leaders at each level to identify what safety guidance their soldiers do not know and to establish training to provide that knowledge. Examples are at Enclosures 3 and 4.

b. Next Accident Assessment - Individuals (versions tailored for aviators and ground personnel available on request to local Safety Office or Army Safety Center). Administer to all soldiers. Permits soldier to assess his risk of causing an accident (soldier does not reveal this result). Additional "blank-box" form requires each soldier to identify action(s) he will take to reduce his risk plus action(s) he needs chain-of-command to take. This feedback is rolled up from platoon to brigade level enabling commanders and leaders to see what their soldiers believe needs to be done to improve unit safety. Example is at Enclosure 5.

c. Next Accident Assessment - Leaders (versions tailored for aviators and ground personnel available on request to local Safety Office or Army Safety Center). Each leader completes the assessment for each soldier he immediately rates. Assessment establishes the risk of each soldier causing an accident and the reasons for the risk. Leader enters the scores on the summary sheet and retains as a record of risk reduction progress. Summary sheets are rolled up from platoon to brigade, enabling commanders and leaders to determine the percentage of high risk soldiers, reasons for the risk and control options. Example is at Enclosure 6.

d. METL Risk Assessment. Each officer and NCO estimates the accident risk for each METL task. For each task they rate as "High" or "Extremely High" they provide the reasons. Examples are at Enclosures 7 and 8.

e. Safety Observations. Observe unit's combat function and METL training in action. Interview commanders, key leaders and selected soldiers. Review training guidance of the unit and next higher level. Objective is to obtain status information about the force protection readiness of each combat function.

f. Analyze and record data. Organize findings from the quiz, next accident assessments and safety observations into a report that establishes the basis for input into the Commander's Training Assessment. Example is at Enclosure 9.

3. EXECUTION PHASE (MISSION RISK MANAGEMENT). During the training mission the commander and staff perform operational risk management procedures as described in the next section. The unit's risk management and safety performance is observed as follows:

a. Observer/controllers (OCs) are assigned to observe, record and report on the unit's performance. For home station exercises, OCs typically come from sister units. For CTC exercises, OCs are from the resident operations group.

b. The flow chart at Enclosure 10 may be used by OCs as a guide in observing the unit's risk management performance.

c. The form at Enclosure 11 may be used by OCs to record observed safety incidents. At Enclosure 2 is a summary of safety factors to standardize information recorded on the observation form at Enclosure 11. The flow chart at Enclosure 12 may be used by OCs to determine the reasons for safety/fratricide incidents observed.

4. ASSESSMENT PHASE (After Action Review).

a. The OCs analyze their observations and provide an assessment to the unit commander. The chart at Enclosure 13 is an example of how the risk management

assessment can be presented. The chart at Enclosure 14 is an example of how the safety assessment can be presented. OCs should report any safety controls considered unnecessarily restrictive and any other opportunities to improve training realism/effectiveness.

b. The SO assesses how well unit performance met the commander's safety guidance and provides the commander recommended changes to safety guidance and controls.

c. Commander uses AAR information to determine if the unit's performance met his safety guidance, the effectiveness of controls implemented during the planning and execution phases and ensures that necessary changes are fed back into the training management cycle.

RISK MANAGEMENT PROCEDURES - OPERATIONS

1. MISSION PLANNING AND EXECUTION (RISK MANAGEMENT). During planning and execution of the mission, commander and staff use risk management procedures to identify and control mission, enemy, terrain/weather, troop and time (METT-T) hazards. The chart at Enclosure 15 shows how risk management can be integrated into the tactical decision making process.

a. Hasty risk assessment. The SO gathers METT-T information from the staff and completes a hasty risk assessment for each course of action (COA). Risk assessment matrices tailored for the unit's METL may be used for this purpose. The risk level of each COA should be entered on the decision matrix as the Force Protection (Safety and Fratricide Avoidance) criterion.

b. Deliberate risk management. Commander selects the COA and decides to accept the level of risk or elevate the decision to the next command level. For the selected COA, each staff officer applies risk management procedures for his combat function to identify the most severe and most probable hazards and implement one or more controls for each. Care is taken to avoid unnecessary safety restrictions. The Executive Officer (XO) reviews control options developed by the staff that have cross-function implications. He ensures synchronization of the total risk control effort. Control options addressing high risk hazards and/or having a potentially significant impact on the COA are recommended by the XO to the commander for his decision. Approved controls are developed by the staff and integrated into appropriate paragraphs of the operation order and overlays. Commander and staff then monitor and enforce controls until mission completion. New or increased risk in METT-T hazards are risk managed as they occur during the mission.

2. **MISSION ASSESSMENT (AFTER ACTION REVIEW).** After mission completion, commander and staff assess the unit's risk management effectiveness and force protection (safety/fratricide) performance. Improvements are identified and actions to implement are initiated.

a. For his combat function, each staff officer assesses the effectiveness of each risk management step, the reasons (force protection shortcomings) for incidents experienced during the mission and whether or not the commander's guidance was met. Based on this assessment, each staff officer identifies (and initiates action to implement) improvements needed.

b. The SO collects from the staff information about force protection shortcomings and needed improvements. He identifies those considered significant/having cross-function application and reports them to the XO. The XO reviews these shortcomings and needed improvements, takes action to implement those he deems necessary and elevates to the commander only those having significant mission impact/high accident risk.

c. The commander uses information from the AAR and recommendations from the XO/staff to determine if the unit's risk management and safety performance met his guidance, the effectiveness of hazard controls implemented, and necessary changes to guidance and controls (including TACSOP) for future missions.

RISK MANAGEMENT RESPONSIBILITIES

1. **Commanders.**

a. Ensure readiness of combat functions to minimize human error, materiel failure and environment effects.

b. Establish realistic safety goals, each with objectives and priorities.

c. Ensure commander's training assessment considers readiness of combat functions to protect the force. Select and ensure implementation of long term, short term and near term control actions to improve force protection.

d. Ensure staff integrates risk management into the planning and execution of collective training and operational missions.

e. Make mission risk decision. Select, monitor and enforce implementation of controls for the most severe/most probable hazards.

f. Determine if unit performance met commander's safety guidance. Determine effectiveness of hazard controls and necessary changes to guidance and controls.

Ensure these changes are fed back into the training management cycle and guidance for operational missions, including unit's TACSOP.

2. Safety Officer (SO). For the purposes of this paper, the officer designated by the commander as responsible for the force protection components of safety and fratricide avoidance is identified as the Safety Officer (SO). (NOTE: Analysis of SO tasks outlined in this paper for Brigades and Battalions support placement in the S3 functional area. This S3 placement is reflected in FM 101-5, Final Draft, August 1993).

a. Monitor readiness status of force protection elements. Advise commander when below-standard status (affecting safety) of any element is detected.

b. Assist commander in developing safety goals with objectives and priorities.

c. Assist commander in developing safety input for quarterly training guidance and TACSOP.

d. Develop safety input options for commander's training assessment.

e. Complete hasty mission risk assessment for each course of action (COA) during operational missions.

f. Assess unit mission risk management and safety performance during collective training. Provide commander recommended changes to safety guidance and controls.

3. Staff (All).

a. Execute functions to provide:

(1) Support needed to meet operational requirements.

(2) Procedures and standards that are clear and practical for each METL task.

(3) Training necessary for METL performance to standard.

b. Assist SO in identifying safety-related shortcomings in combat functions and developing control actions.

c. Apply deliberate mission risk management procedures. Develop and implement controls selected by the commander.

4. **Leaders.**

a. Enforce METL task performance to standard. Adopt the "Crawl-Walk-Run" approach in planning and executing training.

b. Assist SO in developing, administering and scoring the Safety Quiz. Use results to establish and execute training to provide needed safety knowledge and skills.

c. Complete Next Accident Assessment for each soldier rated. Use results to provide counselling and training needed to reduce each soldier's risk.

d. Execute risk reduction controls selected by commander by developing and implementing supporting leader-level controls. Apply hasty risk management procedures in executing each METL task.

5. **Individuals.**

a. Sustain self-disciplined duty performance and conduct.

b. Execute risk management controls selected by the commander and leader.

c. Complete the Next Accident Assessment for Individuals. Identify control actions for risk factors revealed by the assessment. Execute those within personal capability. Request chain-of-command assistance with those above personal authority/capability.

d. Use hasty risk management procedures in executing METL tasks.

RISK MANAGEMENT TOOLS THAT CAN IDENTIFY READINESS SHORTCOMINGS IN FORCE PROTECTION ELEMENTS

TOOLS	FORCE PROTECTION ELEMENTS				
	Support	Standards	Training	Leader	Individual
Commander's Training Assessment	X		X	X	
Mission Training Plan		X			
Mission Readiness Report (USR) { Equipment	X		X		
Training	X				
Personnel			X	X	
Overall	X				
Next Accident Assessment	X	X	X	X	X
Safety Readiness Quiz			X		
Observation and After Action Review	X	X	X	X	X
Unit Accident Analysis	X	X	X	X	X
Army Training Evaluation Plan			X		
Mission Risk Assessment	X		X	X	
Mission Wargaming	X		X	X	

ENCL 1

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TYPES OF ACCIDENTS

- **GROUND OPERATIONS**
  - Wheeled Vehicle
  - Tracked Vehicle
  - Weapons Handling
  - Maintenance
  - Materiel Handling
  - Combat Soldiering
  - Other (specify)
- **AVIATION OPERATIONS**
  - Tree Strike
  - Wire Strike
  - Brownout
  - Overtorque
  - Hard Landing
  - Other (specify)

CAUSE FACTORS

Human Error (80%) (See List Below)

Materiel/Equipment Failure (5%)

- Wheeled Vehicle *(Brakes, Tires, Electrical system, etc.)*
- Tracked Vehicle *(Hatches, Weapon system, Tracks, etc.)*
- Aircraft *(Fuel control, Compressor, Cargo hook/sling, etc.)*
- Weapon *(Machine gun, Pistol, Pyrotechnic simulator, etc.)*
- Maintenance *(Wheel split rims, winches/hoists, hand tools, etc.)*
- Other (specify)

Environment (15%)

- Surface/Space (e.g., rough, inclined, slippery, confined)
- Illumination (e.g., dark, bright)
- Temperature/Humidity (e.g., cold, hot)
- Precipitation (e.g., rain, ice, snow)
- Wind/Turbulence
- Contaminants (e.g., carbon monoxide, fumes, chemicals, foreign objects/debris)
- Animals/Bugs/Birds/Snakes/Poison Plants
- Other (specify)

HUMAN ERROR - Ground Operations	COMMON READINESS REASONS: INDIVIDUAL	LDR	TNG	STDS	SUPPORT
WHEELED VEHICLE					
Excessive Speed	X	X	X		
Unsafe Road Conditions	X		X	X	
Night/Excessive Duty Hours		X		X	
Improper Turning	X		X		
Unsafe Mechanical Condition			X		X
Improper Passing			X		
Following too Close	X	X	X		
Mounting/Dismounting Vehicle	X				
Other (Specify)					
TRACKED VEHICLE					
B-D-A Operations Checks	X	X			X
Rough Terrain	X		X		
Excessive Speed	X	X	X	X	
Darkness/Fatigue	X	X	X	X	
Improper Ground Guiding	X	X			
Crew Coordination/Commo	X		X	X	X
Mounting/Dismounting Vehicle	X				
Other (Specify)					
WEAPONS HANDLING					
Sighting/Aiming/Firing/Throwing	X	X	X		X
Unauthorized Use/Handling (Duds)	X	X	X		
Carrying/Lifting/Transporting	X				
Disarming/Unloading (Improper clearing)	X		X		
Body Positioning	X				
Loading/Arming	X		X		
Emplacing	X				
Assembling/Cleaning/Disassembling *(Improper clearing)*	X		X		
Other (Specify)					
MAINTENANCE					
Improper Use of Tools/Equipment	X	X	X	X	X
Improper Lifting	X			X	
Improper Body Position	X		X		
Improperly Secured Materiel/Equip/Veh	X	X			
Improper Push/Pull/Grip/Hold	X				
Inadequate Inspection (Components, Equip/Area)			X		
Other (Specify)					

HUMAN ERROR - Ground Operations(Cont'd)	COMMON READINESS REASONS: INDIVIDUAL	LDR	TNG	STDS	SUPPORT
MATERIEL HANDLING					
Improper Technique	X	X	X		
Unsecured/Unstable Load	X		X		
Environmental Hazard		X			X
Getting On/Off Vehicle	X				
Equipment Usage		X			
Other (Specify)					
COMBAT SOLDIERING					
Tactical Parachuting - Improper Exit					
- Improper Descent					
- Improper PLF					
Traversing Terrain Under Adverse Env Conditions					
Camouflaging:					
- Removing/Emplacing Net *(Entanglements/Falls)*					
- Failing to Maintain 3 Points of Contact on Veh					
Other (Specify)					
OTHER (SPECIFY)					

HUMAN ERROR - Aviation Operations	COMMON READINESS REASONS: INDIVIDUAL	LDR	TNG	STDS	SUPPORT
Scan	X	X	X	X	
Coordinate	X	X	X	X	
Detect Hazards/Obstacles					
Maintain/Recover Orientation	X	X			
Plan - Preflight	X				
Plan - During Flight	X	X			
Diagnose/Respond to Emergency					
Estimate Distance/Closure					
Other (Specify)					

READINESS REASONS

INDIVIDUAL (48%) - SOLDIER KNOWS AND IS TRAINED TO STANDARD BUT ELECTS NOT TO FOLLOW STANDARD (SELF DISCIPLINE).
- ATTITUDE
- FATIGUE (SELF-INDUCED)
- OVERCONFIDENCE
- ALCOHOL, DRUGS
- HASTE

LEADER (18%) - LEADER DOES NOT ENFORCE KNOWN STANDARD.
- DIRECT SUPERVISION - UNIT COMMAND SUPERVISION
- HIGHER COMMAND SUPERVISION

TRAINING (18%) - SOLDIER NOT TRAINED TO KNOWN STANDARD (INSUFFICIENT, INCORRECT OR NO TRAINING ON TASK).
- SCHOOL - UNIT - EXPERIENCE, OJT

STANDARDS (8%) - STANDARDS/PROCEDURES NOT CLEAR OR PRACTICAL, OR DO NOT EXIST.
- TASK - CONDITION - STANDARD
- OPERATING PROCEDURES (AR, TM, FM, SOP, ETC.)

SUPPORT (8%) - EQUIPMENT/MATERIEL IMPROPERLY DESIGNED/NOT PROVIDED; INSUFFICIENT NUMBER/TYPE OF PERSONNEL; INADEQUATE MAINTENANCE/FACILITIES/SERVICES

ENCL 2

GROUND SAFETY QUIZ
- TOP 10 QUESTIONS MISSED -

Q#	TOPIC	MISSED
22	HEATER/STOVE OPNS - TENT STOVE	96% (45)
49	ENVIRONMENT - RABIES	87% (41)
36	VEH OPNS - FOLLOWING DISTANCE	83% (39)
10	WPNS HANDLING - SMALL ARMS	77% (36)
50	ENVIRONMENT - LIGHTNING	77% (36)
35	VEHICLE OPNS - SPEED LIMITS	72% (34)
47	TRANSPORTING AMMUNITION	72% (34)
25	COLD INJURY - ACCLIMITIZATION	64% (30)
20	HEATER OPNS - HEATER FUEL	60% (28)
7	RISK MGMT - HAZARD ASSESSMENT	57% (27)
2	HUMAN ERROR ACCIDENTS	51% (24)
39	VEH OPNS - TRACK VEH & TROOPS	45% (21)

SCORE SUMMARY

BEST 86% (1 SOLDIER)

AVE 71% (47 SOLDIERS COMPLETED QUIZ)

WORST 40% (1 SOLDIER)

ENCL 3

AVIATION SAFETY QUIZ
- TOP 10 QUESTIONS MISSED -

Q#	TOPIC	MISSED
25	POSITIVE COMMUNICATION	54%
1	AVIATION ACCIDENT LOSSES - WARTIME	50%
8	INADVERTENT IMC	50%
9	PERFORMANCE PLANNING UPDATE - REQTS	45%
5	PROBLEM RELATED TO IMC	37%
40	NIGHT AIDED CREW ERROR ACCIDENTS	37%
45	IR-BAND PASS FILTER - REQTS	37%
37	FACTORS IN "FAILURE TO DETECT" - ACCIDENTS	33%
46	BROWN OUT	29%
3	READINESS DEFICIENCIES - ACCIDENTS	25%
6	FLIGHT OVER FLAT TERRAIN	25%

SCORE SUMMARY

BEST	96%	(1 SOLDIER)
AVE	86%	(24 SOLDIERS COMPLETED QUIZ)
WORST	76%	(1 SOLDIER)

ENCL 4

Typical Soldier Response To:
"Actions I Will Take to Reduce My Accident Risk"

- Thoroughly plan and supervise all vehicle movements.
- Infuse risk management considerations and controls into all battalion staff planning and orders.
- Conduct PCI of all personnel and equipment.
- Conduct additional leader training for LOGPAC and ROM operations.
- Establish internal soldier and leader rest plans.
- Protect "MILES casualties" from unnecessary exposure to cold weather injuries during the evacuation process.
- Provide hazard identification, assessment and control recommendations for each operation at the shift change briefings.
- Put soldier safety considerations into every mission.
- Make on-the-spot corrections and enforce safety standards.
- Identify high risk soldiers and monitor their performance.
- Conduct mission risk assessments and establish controls or ask for help.
- Learn and enforce all safety standards and provide supervision.
- Cross-train all crews.
- Increase emphasis on Night Vision Device training and driving.
- Focus on each task.
- Drink plenty of water, eat well and get as much rest as possible.
- Pay attention to the environment and wear cold weather gear correctly.
- Brief soldiers on the mission hazards and controls.
- Use buddy teams.
- Think before acting and not be impatient.
- Fix or report problems to the chain-of-command.
- Stay alert for hazardous conditions.
- Follow appropriate speed for the conditions.

"Chain-of-Command Action(s) Needed to Reduce My Accident Risk"

- Schedule and de-conflict problems at washracks and motorparks.
- Provide clear, consistent and timely mission guidance.
- Develop and enforce key leader, TOC and staff rest plans.
- Provide time and resources to plan and execute missions.
- Conduct new driver training.
- Conduct additional leader training on risk management.
- Incorporate safety considerations into all plans and orders.
- Provide adequate reaction time to changes in plans.
- Allow NCO support chain to enforce safety standards.
- Provide adequate time to rehearse complex missions.
- Provide more local training area time with equipment to practice maneuver tasks.
- Provide clear guidance on safety standards and enforce them.
- Provide reverse cycle training opportunities to improve night fighting skills.
- Stabilize crew personnel for CTC rotations.
- Provide the required tools to complete maintenance.

ENCL 5

- Keep plans simple.
- Ensure soldiers receive adequate water, food and rest during CTC rotations.
- Improve communication and coordination in the unit.
- Publish SOP.
- Conduct frequent AARs to discuss lessons learned.
- Inform soldiers of weather and hazards prior to each mission.
- Supervise safety by appointing exceptional safety officers/NCOs.
- Explain "Why" missions are important.
- Spread hard missions between all units.
- Protect soldiers from frostbite.

ACCIDENT RISK ASSESSMENT OF PERSONNEL RATED BY COMMANDERS/LEADERS

RISK FACTORS (FROM NEXT ACCIDENT ASSESSMENT)	POINTS	PERCENT OF PERSONNEL
1. Self discipline (dependability)		
a. Counseled for poor performance	8	18%
b. Had at fault accidents/citations	8	8
c. Abused alcohol/drugs	8	4
d. Had judicial/non-judicial punishment	8	7
e. GT score of 90 or less	8	4
f. Males under age 25	8	53
2. Leadership (enforcement of standards)		
a. Insufficient knowledge/experience	6	29
b. Tolerates below-standard performance	12	21
3. Training (job skills and knowledge)		
a. MOS SDT (SQT) score less than 70	9	5
b. Not proficient in assigned tasks outside MOS	9	10
4. Standards (task-cond-std/procedure)		
a. Do not exist	4	8
b. Not clear/practical	4	13
5. Support (insuff amount/type/condition)		
a. Equipment	2	13
b. Supplies	2	14
c. Services/facilities	2	18
d. Personnel	2	27

ENCL 6

- 91 Soldiers were assessed by 19 Commanders/Leaders
- Assessment results were:

RISK LEVEL	PERCENT OF SOLDIERS
Extremely High	2%
High	11%
Medium	15%
Low	71%

- Indicators/sources of accident risk as reported are shown at left.

ASSESSMENT OF ACCIDENT RISK FOR METL

RISK RANK OF METL	NUMBER OF PERSONNEL	RISK OF HAVING ACCIDENT
		LOW MED HI EXT HI (1 2 3)
1. TRANSITION TO MISSION	20	1.50
2. DEPLOY/REDEPLOY	20	2.25
3. PERFORM TACTICAL ROAD MARCH	20	1.65
4. FIGHT MEETING ENGAGEMENT	20	2.20
5. ATTACK	20	2.30
6. DEFEND	16	1.56
7. PEACEKEEPING/PEACE ENFORCEMENT	20	2.05

ENCL 4

REASONS FOR ACCIDENT RISK IN METL TASKS

1. TRANSITION TO MISSION - MEDIUM RISK
   - first mission
   - many inexperienced/untrained crews

2. DEPLOY/REDEPLOY - HIGH RISK
   - first and last mission
   - fatique and many hours of driving
   - 100+ vehicles in convoy, 80+ vehicles by rail
   - German roads in adverse weather
   - new crews and leaders (rail loading experience)
   - too many distractors

3. PERFORM TACTICAL ROAD MARCH - MEDIUM RISK
   - tired soldiers anticipating next mission
   - German roads in adverse weather

4. FIGHT MEETING ENGAGEMENT - HIGH RISK
   - maneuver in highly fluid environment
   - untrained/inexperienced personnel
   - all new drivers, little time in vehicles practicing maneuvers
   - minimal training between crews and squads
   - too many distractors
   - new soldiers not trained to fight as a crew

5. ATTACK - HIGH RISK
   - moving fast
   - night/early morning, little sleep, late in rotation
   - untrained/inexperienced personnel
   - new drivers in all vehicles, little time in vehicles practicing maneuvers
   - handling of demolitions, increased use of heavy equipment

6. DEFEND - MEDIUM RISK
   - long hours with little rest
   - untrained personnel

7. PEACEKEEPING/ENFORCEMENT- HIGH RISK
   - new mission (confusion)
   - civilians on battlefield around vehicles
   - decentralized operations (platoons and squads on their own)
   - sleep deprivation
   - new soldiers not task trained
   - route clearing, mines, etc. (Cbt Eng)
   - soldier discipline

ENCL 8

FORCE PROTECTION (SAFETY) METL ASSESSMENT
INPUT TO
COMMANDER'S TRAINING ASSESSMENT
(FM 25-100 & FM 25-101)

FORCE PROTECTION READINESS ASSESSMENT OF COMBAT FUNCTIONS

MISSION ESSENTIAL TASK	INT	MAN	FS	AD	MOB	LOG	BC	ALL	ACDT RISK
MOVE THE BDE						ILTS	LT		H

ACCIDENT RISK CONTROL OPTIONS

LONG TERM (EXAMPLES)

- HAVE NCOs DEVELOP AND IMPLEMENT A COMPLETE BRIGADE-LEVEL SAFETY TRAINING PROGRAM (LOG-L,T &BC-T, L)
- ADD SAFETY CRITERIA TO THE LEADER CERTIFICATION PROGRAM AT BATTALION AND COMPANY LEVELS (LOG-L,T & BC-L,T)
- COUNTER SHORTAGE OF PVS-7 NVGs BY REDISTRIBUTING FROM SISTER UNITS FOR TRAINING AND USE IN FTX NIGHT MISSIONS (LOG-T, S)

NEAR TERM (EXAMPLE)

- INITIATE DEVELOPMENTAL/SUSTAINMENT PERFORMANCE-ORIENTED TRAINING (SAFETY STAKES) FOR GUIDANCE IN NTC RULES OF ENGAGEMENT AND INSTALLATION'S TACTICAL SAFETY HANDBOOK. (LOG-T & BC-T,L)

SHORT TERM (EXAMPLE)

- FTXs - IN ADDITION TO NORMAL DUTIES, REQUEST C/Ts FOCUS SAFETY ON-SPOT CORRECTIONS AND AAR OBSERVATIONS ON THE FOLLOWING ACCIDENT PROBLEM AREAS: WHEEL-EXCESSIVE SPEED & FOLLOWING TOO CLOSE; TRACK-B/D/A OPERATION CHECKS, ROUGH TERRAIN PRECAUTIONS (SEAT BELTS & EQUIPMENT SECURED) & IMPROPER GROUND GUIDING. (LOG-I, L)

LEGEND - COMBAT FUNCTIONS READY TO EXECUTE TRAINING (R)

-COMBAT FUNTIONS NOT READY DUE TO SHORTCOMINGS IN: TRAINING (T), LEADERSHIP (L), STANDARDS/PROCEDURES (P), SUPPORT (S), OR SELF DISCIPLINE OF INDIVIDUALS (I)

- ACCIDENT RISK: EXTREMELY HIGH (E), HIGH (H), MEDIUM (M), LOW (L)

CALLAPPI

ENCL 9

RISK MANAGEMENT ASSESSMENT

BEFORE THE MISSION

+ STRENGTH
- WEAKNESS

1. ASSESSMENT ACCOMPLISHED?

WAS A SAFETY RISK ASSESSMENT ACCOMPLISHED AT TF/BN LEVEL?

(-) NO — REPORT FINDING TO TF/BDE CDR!

(+) YES

2. HAZARDS IDENTIFIED?

WERE THE "MOST PROBABLE" HAZARDS IDENTIFIED FOR EACH TYPE OF OPERATION (E.G., WHEELED VEH, TRACKED VEH, ETC)?

(-) NO/ INADEQUATE

(+) YES/ ADEQUATE

3. PROBABILITY ASSESSED?

WAS PROBABILITY OF EACH HAZARD'S OCCURRENCE/SEVERITY APPROPRIATELY ASSESSED?

(-) NO/ INADEQUATE

(+) YES/ ADEQUATE

4. CONTROL OPTIONS IDENTIFIED?

WERE CONTROL OPTIONS IDENTIFIED TO ELIMINATE/REDUCE HAZARDS IDENTIFIED?

(-) NO/ INADEQUATE

(+) YES/ ADEQUATE

5. DECISION LEVEL?

WAS DECISION TO ACCEPT MISSION RISK MADE AT APPROPRIATE COMMAND LEVEL?

(-) NO/ INADEQUATE

(+) YES/ ADEQUATE

6. CONTROLS COMMUNICATED?

WERE IDENTIFIED HAZARDS AND CONTROLS CLEARLY COMMUNICATED TO PERSONNEL RESPONSIBLE FOR IMPLEMENTING CONTROLS, E.G., CO/PLT LEADERS?

(-) NO/ INADEQUATE

(+) YES/ ADEQUATE

DURING THE MISSION

7. CONTROLS IMPLEMENTED?

WERE IDENTIFIED CONTROLS APPROPRIATELY IMPLEMENTED AND ENFORCED AT CO/PLT LEVEL?

(-) NO/ INADEQUATE

(+) YES/ ADEQUATE

AFTER THE MISSION

8. RISK MGMT EFFECTIVE?

WAS RISK MGMT PROCESS EFFECTIVE IN IDENTIFYING AND CONTROLLING HAZARDS ACTUALLY EXPERIENCED DURING MISSION?

(-) NO/ INADEQUATE

(+) YES/ ADEQUATE

(WHICH STEP(S) TURNED OUT TO BE INEFFECTIVELY EXECUTED?)

ENCL-10

CALLAPPL

FORCE PROTECTION
(SAFETY) OBSERVATION

CALL SIGN *Werewolves*

1. UNIT *B - 3/29* DTG *071930 Apr 93*

2. TYPE OPERATION (CHECK ONE)

WHEELED VEHICLE		MATERIEL HANDLING	
TRACKED VEHICLE	X	COMBAT SOLDIERING	
WEAPONS HANDLING		AVIATION OPS	
MAINTENANCE		OTHER	

3. PROBLEM AREA (SEE LIST)

- Operation/precautions for rough terrain

Two soldiers, one standing and the other kneeling on top of M548 ammunition carrier while the vehicle was moving forward/

[Ref: NTC ROE - Tracked Vehicle Operations, Crew and Passenger Protection]

4. READINESS SHORTCOMING(S) - (CHECK ONE OR MORE)

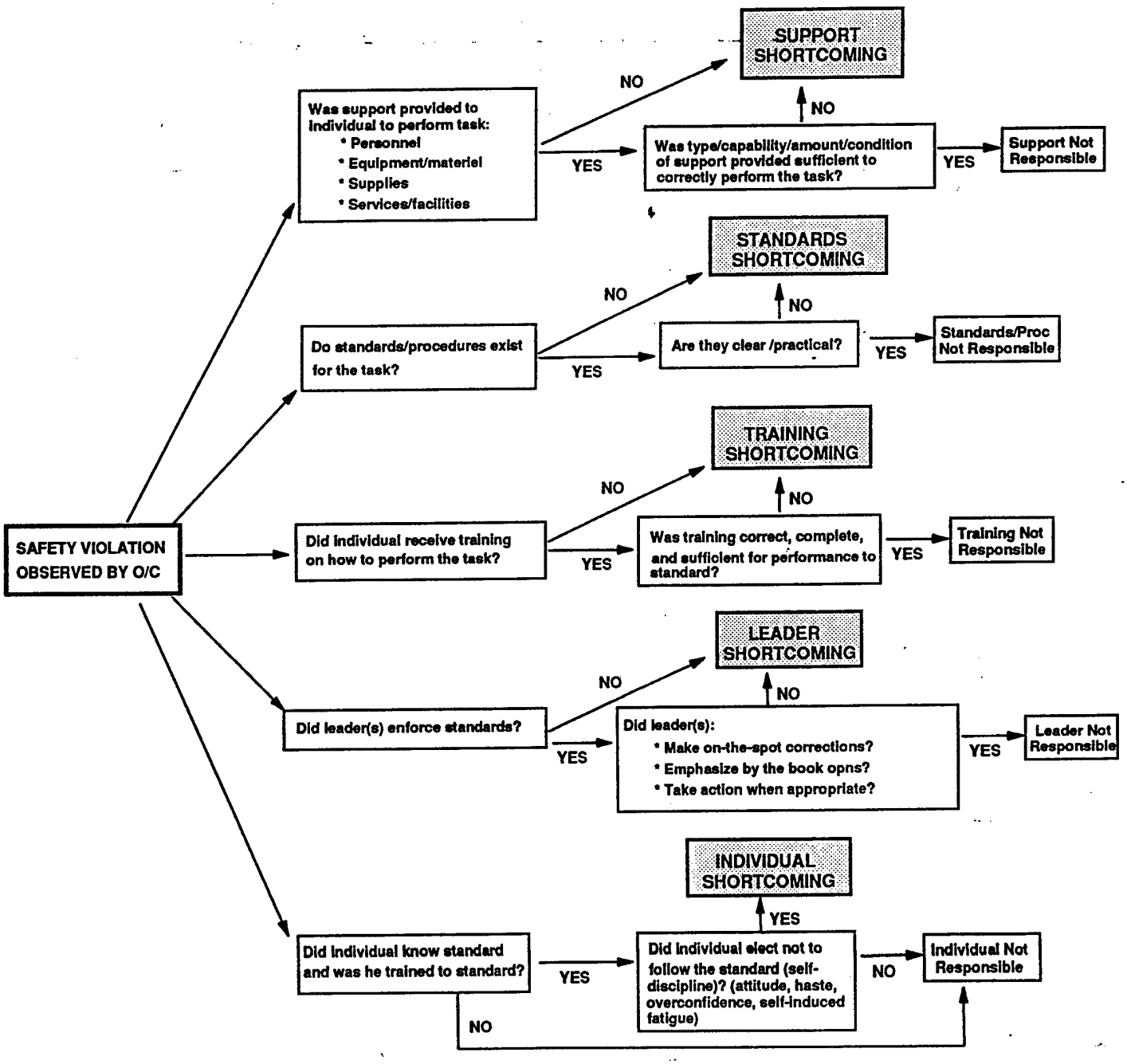
INDIVIDUAL	X	STANDARDS	
LEADER	X	SUPPORT	
TRAINING			

5. CONTROLS COMMUNICATED? YES X NO

6. CONTROLS IMPLEMENTED? YES NO X

ENCL 14

DETERMINING READINESS SHORTCOMING(S) RESPONSIBLE FOR SAFETY VIOLATIONS



ENCL 12

CALLAPPM

RISK MANAGEMENT ASSESSMENT

RISK MANAGEMENT STEP	ASSESSMENT		COMMENTS
	Sustain	Improve	
BEFORE THE MISSION			
1. ASSESSMENT ACCOMPLISHED?		X	NOT A ROUTINE STEP WITHIN MISSION ANALYSIS
2. HAZARDS IDENTIFIED?		X	ONLY THE MOST OBVIOUS HAZARDS IDENTIFIED. SPORADIC INPUT
3. PROBABILITY ASSESSED?		X	NOT INCLUDED IN COA WARGAMING OF EVALUATION CRITERIA
4. CONTROL OPTIONS IDENTIFIED?	X		OPTIONS WERE PRESENTED TO REDUCE RISK
5. DECISION LEVEL?	X		RECOMMENDATIONS APPROVED BY BN CDR DURING DECISION BRIEF
6. CONTROLS COMMUNICATED?	X		CONTROLS BRIEFED AS PART OF OPORD
DURING THE MISSION			
7. CONTROLS IMPLEMENTED?	X		CHAIN OF COMMAND EMPHASIS
AFTER THE MISSION			
8. RISK MGMT EFFECTIVE?		X	NO DOCUMENTATION/AAR

CMTCOG30

ENCL 13

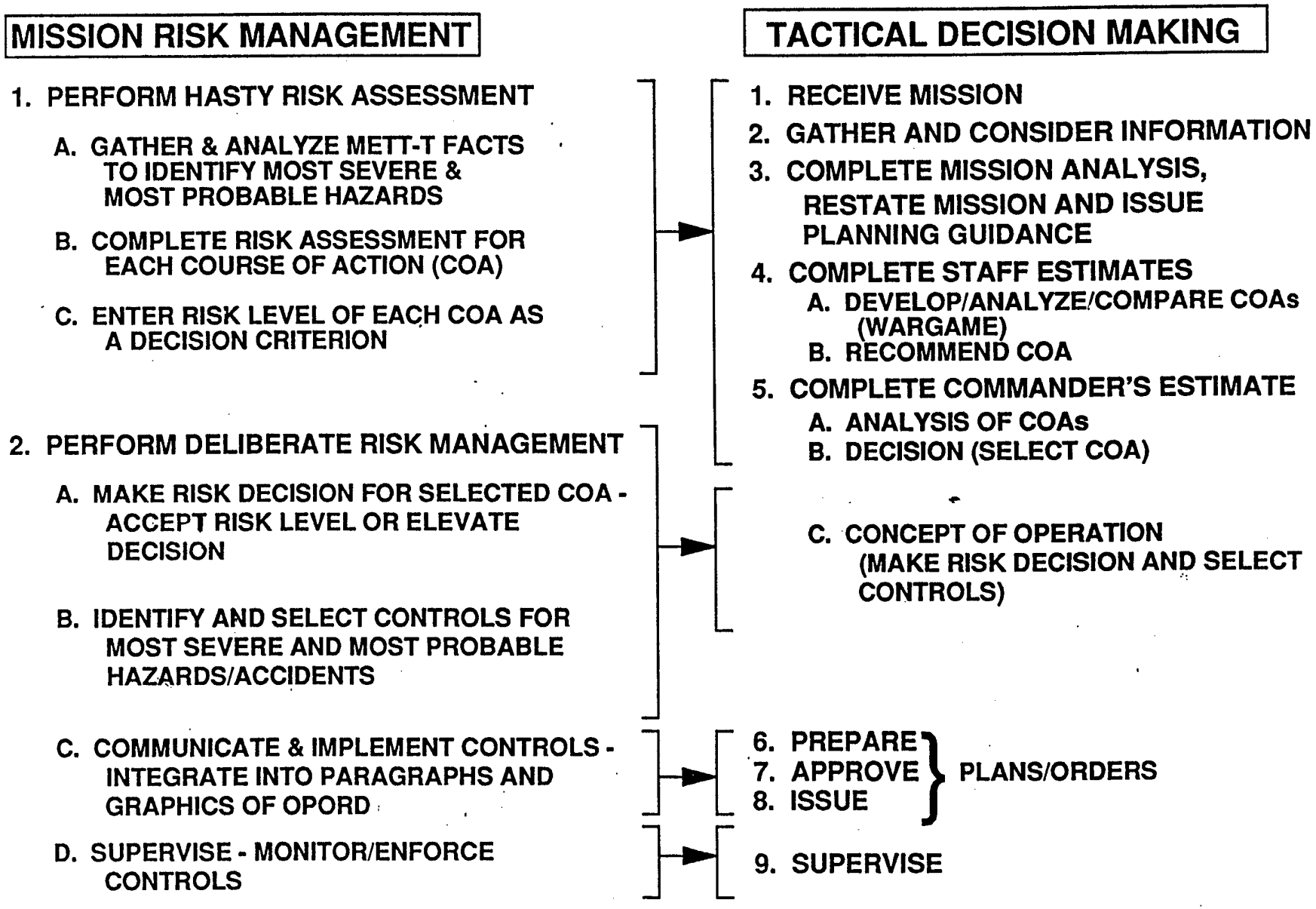
FORCE PROTECTION - SAFETY

READINESS ELEMENT	INCIDENTS
INDIVIDUAL (Self discipline to standard)	(1) SOLDIERS NOT MAINTAINING 3 POINTS OF CONTACT WHILE MOVING ON TOP OF TRACK VEHICLES.
	(2) SOLDIER SUSTAINED A HEAD WOUND AFTER BEING HIT BY A CAMOUFLAGE POLE.
LEADER (Enforce standards)	(1) PRE CUT CHARGES.
	(2) LACK OF SECONDARY CHECKS RESULTED FUSE SETTING ERROR ENDANGERING THE WELL BEING OF FRIENDLY SOLDIERS.
	(3) LACK OF SECONDARY CHECKS RESULTED IN ROUND LANDING IN THE WRONG PLACE DURING A SMOKE MISSION.
TRAINING (Skills to standard)	LACK OF DRIVERS TRAINING RESULTED IN A SITUATION WHICH ENDANGERED THE WELL BEING OF SOLDIERS GROUND GUIDING A TON TRUCK WHILE BACKING UP.
STANDARDS (Standards/procedures clear & practical)	
SUPPORT (Equipment, personnel, facilities, maintenance, services to standard)	

ENCL 14

CMTC0034

INTEGRATION OF RISK MANAGEMENT INTO DECISION MAKING PROCESS



ENCL 15

CMTC-I17